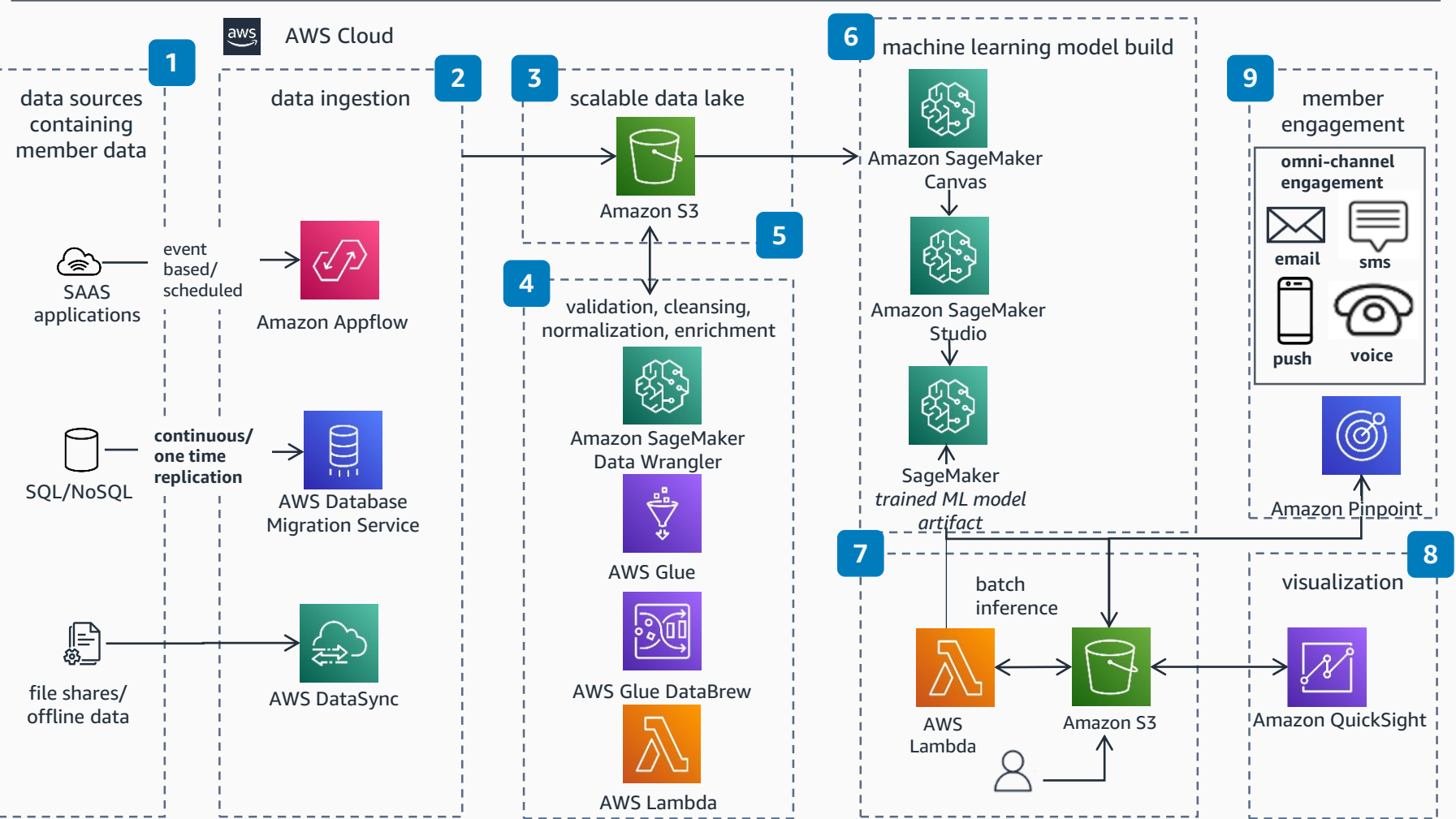


# Guidance for Predictive Scores for Member Retention on AWS

This architecture gives nonprofits the ability to use machine learning (ML) to determine which donors or members are most likely to churn.



- 1** Donor and member data is collected from multiple data sources across the organization. Demographic information, history on past donations and engagement with the nonprofit, and data found in the Donor Relationship Management/ Customer Relationship Management (DRM/CRM) software all may be useful indicators.
- 2** Depending on the type, location, and format of the data source, **AWS Database Migration Service**, **AWS DataSync**, and/or **Amazon AppFlow** are used to ingest the data into a data lake in AWS.
- 3** **Amazon Simple Storage Service (Amazon S3)** is used for data lake storage.
- 4** **AWS Glue** can be used to extract, transform, catalog, and ingest data across multiple data stores. **AWS Glue DataBrew** or **Amazon SageMaker Data Wrangler** could also be used for visual data preparation. Use **AWS Lambda** for enrichment and validation.
- 5** Data is placed back into **Amazon S3** post-processing for consumption.
- 6** **SageMaker Canvas** is an optional no-code solution to visualizing features and training a ML model. **SageMaker Studio** can be used independently or in tandem with **SageMaker Canvas** to further build, tune, and deploy the model.
- 7** Batches of members or donors can be uploaded into **S3**, triggering an **AWS Lambda** function to run inference using **SageMaker Batch Transform**, generating a list of the members that are most likely to churn. The output is then dropped back into **S3**.
- 8** **Amazon Quicksight** can be used to visualize this list and target individuals for next steps.
- 9** Use **Amazon Pinpoint** for member engagement, defining segments of members and reaching out to them with proactive, personalized messages through the channel of their choice.